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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/530,715

04/08/2005

Brian Ellis

608-454

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23117 7590 08/18/2008  
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EXAMINER

OH, TAYLOR V

ART UNIT

PAPER NUMBER

1625

MAIL DATE

DELIVERY MODE

08/18/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/530,715	<b>Applicant(s)</b> ELLIS, BRIAN	
	<b>Examiner</b> Taylor Victor Oh	<b>Art Unit</b> 1625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 10-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **Final Rejection**

### **The Status of Claims**

Claims 1-11 are pending.

Claims 1-9 are rejected.

Claims 10-11 are withdrawn from consideration.

### **Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**1. The rejection of Claims 1-9 under 35 U.S.C. 102(b) as being anticipated clearly by Ellis et al (EP 1043064) has been withdrawn.**

2. In view of the applicant's argument and amendment, the rejection of Claims 1-9 under 35 U.S.C. 102(b) as being anticipated clearly by Ellis et al (EP 1043064) has been changed to the rejection of Claims 1-9 under 35 U.S.C. 103(a) as being unpatentable over Ellis et al (EP 1043064).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis et al (EP 1043064).

Ellis et al discloses the followings (see pages 2-3, paragraphs 0011-0012):

{0011} Accordingly, the present invention provides a catalyst composition for the oxidation of ethane to ethylene and/or acetic acid and/or for the oxidation of ethylene to acetic acid which composition comprises in combination with oxygen the elements molybdenum, vanadium, niobium and gold in the absence of palladium according to the empirical formula:  $\text{Mo}_a\text{W}_b\text{Au}_c\text{V}_d\text{Nb}_e\text{Y}_f$  (I) wherein Y is one or more elements selected from the group consisting of: Cr, Mn, Ta, Ti, B, Al, Ga, In, Pt, Zn, Cd, Bi, Ce, Co, Rh, Ir, Cu, Ag, Fe, Ru, Os, K, Rb, Cs, Mg, Ca, Sr, Ba, Zr, Hf, Ni, P, Pb, Sb, Si, Sn, Tl, U, Re, Te, La and Pd; a, b, c, d, e and f represent the gram atom ratios of the elements such that:

$$0 < a \leq 1; 0 \leq b < 1 \text{ and } a + b = 1;$$

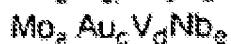
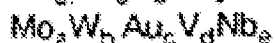
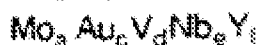
$$10^{-5} < c \leq 0.02;$$

$$0 < d \leq 2;$$

$$0 < e \leq 1; \text{ and}$$

$$0 \leq f \leq 2.$$

[0012] Catalysts embraced within the formula (I) include:-



However, the instant invention differs from the prior art in that the vanadium in a gram atom ratio of between 0.4 and 0.865 and the niobium in a gram atom ratio of between 0.135 and 0.23; their sum of the respective gram atom ratios of vanadium and niobium between 0.55 to 1 are not specified.

Even so, the prior art does disclose the range of the “d” for the vanadium to be  $d > 0.1$ , whereas the range of the “e” for the niobium to be  $e > 0.01$  (see page 3, paragraph); furthermore, from this information, it seems reasonable for the skilled artisan in the art to figure out the sum of the respective gram atom ratios of vanadium and niobium, which is  $e+d > 0.11$ . Each value of them in the prior art overlaps with each of those claimed values. The selection of each specific ratio of the d and e values in the catalyst composition are well understood by those of ordinary skill in the art to be result-effective variables, especially when attempting to control selectivity of the oxidation process. Therefore, it would have been obvious to the skilled artisan in the art

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to be motivated to select the suitable range of each value of “ d ” and “ e ” in the prior art’s catalyst composition by routine experimentations to arrive at the claimed invention. This is because the skilled artisan in the art would expect such a manipulation to be successful and feasible as shown in the prior art

### Applicants’ Argument

Applicants argue the following issues:

a. the prior art does not disclose the vanadium in a gram atom ratio of between 0.4 and 0.865 and the niobium in a gram atom ratio of between 0.135 and 0.23; their sum of the respective gram atom ratios of vanadium and niobium between 0.55 to 1.

Applicants’ arguments have been noted, but the arguments are not persuasive.

First, regarding the applicants’ argument , the Examiner has noted applicants’ arguments. However, as indicated in the above, the prior art does disclose the range of the “ d ” for the vanadium to be  $d > 0.1$ , whereas the range of the “ e ” for the niobium to be  $e > 0.01$  (see page 3 , paragraph); furthermore, from this information, it seems reasonable for the skilled artisan in the art to figure out the sum of the respective gram atom ratios of vanadium and niobium, which is  $e + d > 0.11$ . Each value of them in the prior art overlaps with each of those claimed values. The selection of each specific ratio of the d and e values in the catalyst composition are well understood by those of ordinary skill in the art to be result-effective variables, especially when attempting to

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control selectivity of the oxidation process. Therefore, it would have been obvious to the skilled artisan in the art to be motivated to select the suitable range of each value of “ d ” and “ e ” in the prior art’s catalyst composition by routine experimentations to arrive at the claimed invention. Therefore, applicants’ argument is not persuasive.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taylor Victor Oh whose telephone number is 571-272-0689. The examiner can normally be reached on 8:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres can be reached on 571-272-0867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Taylor Victor Oh/  
Primary Examiner, Art Unit 1625  
8/14/08